

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008531**Date Inspected:** 20-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** CWI: Ju Jun/Li Lin**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower components**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Dilip Chakrabarti was present during the times noted above for observations relative to the work being performed.

Bay# 10- Tower Assembly:

This QA Inspector randomly observed the following work in progress:

**SMAW Process:**

Non critical repair welding of skin plate & stiffeners located on PCMK NSD1 FCSA4-1 E/E. Welder is identified as 053829. ZPMC QC is identified as Deng Zhi Bing. The welding variables recorded by QC appeared to comply with the specified WPS no. WPS-345-SMAW-2G 2(F)-Repair.

Non critical repair welding of skin plate & stiffeners located on PCMK NSD1 FCSA4-1 E/E. Welder is identified as 040268. ZPMC QC is identified as Deng Zhi Bing. The welding variables recorded by QC appeared to comply with the specified WPS no. WPS-345-SMAW-2G 2(F)-Repair.

Non critical repair welding of stiffeners located on PCMK SSTL3-1 I/K. Welder is identified as 040267. ZPMC QC is identified as Wang Hao. The welding variables recorded by QC appeared to comply with the specified WPS no. WPS-345+485-SMAW-2G 2(F)-Repair.

**FCAW Process:**

Welding of weld Joint# 66 located on PCMK ESTL3-1 C/K. Welder is identified as 066155. ZPMC QC is

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identified as Wang Hao. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4333-TC-P4-F.

Welding of weld Joint# 154 located on PCMK ESTL3-1 C/K. Welder is identified as 048627. ZPMC QC is identified as Wang Hao. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4333-TC-P4-F.

Welding of weld Joint# 153 located on PCMK ESTL3-1 C/K. Welder is identified as 068627. ZPMC QC is identified as Wang Hao. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4333-TC-P4-F.

### SAW Process:

Welding of weld Joint# 1A located on PCMK ED1 A5007-5, 6, 7, 8. Welder is identified as 050295. ZPMC QC is identified as Jiang Xiao Bo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-3221-TC-U5-S-1.

Welding of weld Joint# 1A located on PCMK ED1 A5012-9, 10, 11, 12. Welder is identified as 040489. ZPMC QC is identified as Jiang Xiao Bo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-3221-TC-U5-S-1.

### Bay# 11- Tower Assembly:

This QA Inspector randomly observed the following work in progress:

### FCAW Process:

Welding of weld Joint# 23,122 located on PCMK ESTL3-4 G/K. Welder is identified as 070212. ZPMC QC is identified as You Qi Guo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4332-TC-P4-F.

Welding of weld Joint# 24,123 located on PCMK ESTL3-4 G/K. Welder is identified as 070212. ZPMC QC is identified as You Qi Guo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4333-TC-P4-F.

Welding of weld Joint# 21,119 located on PCMK ESTL3-4 I/K. Welder is identified as 067184. ZPMC QC is identified as You Qi Guo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4332-TC-P4-F.

Welding of weld Joint# 22,120 located on PCMK ESTL3-4 I/K. Welder is identified as 067184. ZPMC QC is identified as You Qi Guo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4333-TC-P4-F.

Welding of weld Joint# 28 located on PCMK ESTL3-4 D/K. Welder is identified as 066882. ZPMC QC is identified as You Qi Guo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4332-TC-P4-F.

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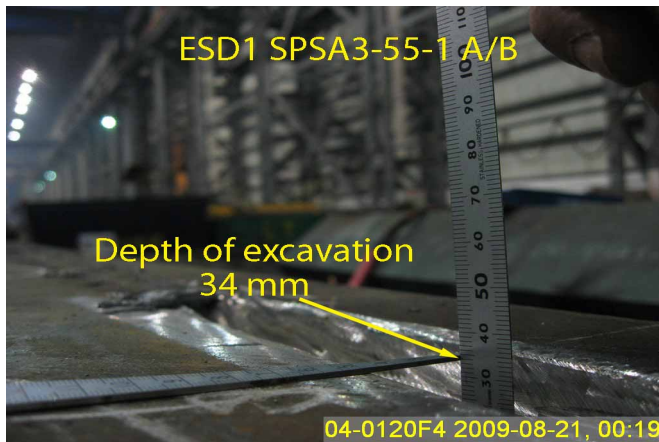
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Welding of weld Joint# 28 located on PCMK ESTL3-4 C/K. Welder is identified as 066882. ZPMC QC is identified as You Qi Guo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4332-TC-P4-F.

Welding of weld Joint# 29 located on PCMK ESTL3-4 D/K. Welder is identified as 066882. ZPMC QC is identified as You Qi Guo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4333-TC-P4-F.

Unless otherwise noted, all work observed on this date appeared to be generally comply with applicable contract documents.



### Summary of Conversations:

Bay# 11- Tower Assembly:

During random Inspection of Tower strut components, it was observed that the areas marked by ZPMC UT operator were excavated by air carbon arc process, for repairing of weld joint# ESD1 SPSA3-55-1 A/B. The depth of excavation was measured approx 34mm to 35mm in some places for the 50mm thick plate which is more than 65% Of the thinner plate thickness. The matter was notified to the ZPMC QC Chao Cheng for obtaining Engineer's approval in the form of Critical Weld Repair (CWR), before carrying out any repair.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod 134-8257-0045, who represents the Office of Structural Materials for your project.

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**Inspected By:** Chakrabarti,Dilip Kumar

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer